What is Claimed is:

1. A method for managing an optical recording medium having at least one temporary defect management area, and at least one spare area in a data area, said method comprising:

replacing data written in a defective area by writing the data written in the defective area to the at least one spare area as replacement data if the defective area within the data area is detected; and

writing defect management information in the at least one temporary defect management area for access to the data written in the spare area, wherein said defect management information for access to the data written in the spare area is identified by at least one navigation pointer.

2. The method according to claim 1, wherein in the writing step, the defect management information is written as defect list information in the at least one temporary defect management area, and the method further comprises managing the defect list information, wherein the defect list information includes navigation pointer information including defect entries corresponding to actual written replacement data, and writing location information of the next available spare area for successive replacement writing.

3. The method according to claim 2, wherein the optical recording medium is a Blu-ray disc of writable once type (BD-WO).

4. The method according to claim 2, wherein the optical recording medium is a Blu-ray disc of read-writable type (BD-RW).

5. The method according to claim 2, wherein the defect list information is temporary defect list information with a recording size smaller than four clusters.

6. The method according to claim 5, wherein the recording size is two clusters or smaller.

7. The method according to claim 2, wherein the defect list information has one cluster recording size, and includes defect entries corresponding to the replacement data.

8. The method according to claim 2, wherein a recording size of the defect list information to be written is varied to a recording size greater than one cluster when the number of defect entries exceeds one cluster of recording size.

9. The method according to claim 8, wherein the recording size of the defect list information to be written is varied to a recording size greater than one cluster but smaller than four clusters.

10. The method according to claim 2, wherein the optical recording medium is a single layer Blu-ray disc of writable once type having an inner spare area and an outer spare area assigned thereto, and the defect list information includes writing location information of the inner spare area available for successive replacement writing of replacement data, and writing location information of the outer spare area available for successive replacement writing of replacement data.

11. The method according to claim 2, wherein the optical recording medium is a dual layer Blu-ray disc of writable once type having an inner spare area and an outer spare area assigned to each of a first layer and a second layer respectively, and the defect list information includes writing location information of the available inner spare areas of the first and second layers for successive replacement writing of replacement data, and writing location information of the available outer spare areas of the first and second layers for successive replacement writing of replacement data.

12. The method according to claim 2, wherein the defect list information has one cluster recording size.

13. The method according to claim 12, wherein the defect list information written previously and newly written defect list information are put into different groups for defect management if all of the defect entries exceed one cluster recording size due to an increase of the defect entries.

14. The method as claimed in claim 13, wherein the defect management information further includes information for identifying the different groups included as disc definition structure information.

15. A method for managing an optical recording medium having at least one temporary defect management area, and at least one spare area in a data area, said method comprising:

replacing data written in a defective area of the data area in the at least one spare area in place of the defective area as replacement data if the defective area within the data area is detected; and

producing defect list information and disc definition structure information in the at least one temporary defect management area for access to the data written in the at least one spare area as replacement data, and managing the defect list information and the disc definition structure information,

wherein the defect list information includes defect entries corresponding to the replacement data actually written, and the disc definition structure information includes writing location information of a next available sector of the spare area for replacement writing as at least one navigation pointer.

16. The method according to claim 15, wherein the defect list information includes a defect list terminator for indicating a termination of writing of defect entries.

17. The method according to claim 15, wherein the writing location information is writing location information corresponding to a first sector of a first cluster of the spare area available for successive replacement writing of new replacement data.

18. The method as claimed in claim 15, wherein the disc definition structure information includes physical sector number information corresponding to a writing location of the defect list information.

19. The method according to claim 15, wherein the optical recording medium is a Blu-ray disc of writable once type with an inner spare area and an outer spare area assigned thereto, and the disc definition structure information includes writing location information corresponding to a first sector of a first cluster of the inner spare area available for successive replacement writing of replacement data, and writing location information corresponding to a first sector of a first cluster of the outer spare area available for successive replacement writing of replacement data.

20. The method according to claim 15, wherein the optical recording medium is a dual layer Blu-ray disc of writable once type with a first layer inner spare area and a first layer outer spare area assigned to a first layer, and a second layer inner spare area and a second layer outer spare area assigned to a second layer, and the disc definition structure information includes writing location information corresponding to first available sectors

of first clusters of the respective inner spare areas of the first and second layers for successive replacement writing of replacement data, and writing location information corresponding to first available sectors of first clusters of the respective outer spare areas of the first and second layers for successive replacement writing of replacement data.

21. A recording medium comprising:

at least one spare area within a data area;

a temporary defect management area for managing a defective area within the data area;

a portion of said at least one spare area capable of storing replacement data, wherein data written in the defective area is replaced by writing the data written in the defective area to the portion of said at least one spare area as the replacement data; and

defect management information in the at least one temporary defect management area for access to the data written in the portion of the at least one spare area, wherein said defect management information for access to the data written in the spare area is identified by at least one navigation pointer.

22. The recording medium according to claim 21, wherein the recording medium is a single layer Blu-ray disc of writable once type having an inner spare area and an outer spare area assigned thereto, and the defect management information includes writing location information of the inner

spare area available for successive replacement writing of replacement data, and writing location information of the outer spare area available for successive replacement writing of replacement data.

23. The recording medium according to claim 21, wherein the recording medium is a dual layer Blu-ray disc of writable once type having an inner spare area and an outer spare area assigned to each of a first layer and a second layer respectively, and the defect management information includes writing location information of the available inner spare areas of the first and second layers for successive replacement writing of replacement data, and writing location information of the available outer spare areas of the first and second layers for successive replacement writing of replacement data.

24. The recording medium according to claim 21, wherein the defect management information is written as defect list information in the at least one temporary defect management area, and the defect list information includes navigation pointer information including defect entries corresponding to actual written replacement data, and writing location information of the next available spare area for successive replacement writing.

25. The recording medium according to claim 24, wherein the recording medium is a Blu-ray disc of writable once type (BD-WO).

26. The recording medium according to claim 24, wherein the recording medium is a Blu-ray disc of read-writable type (BD-RW).

27. The recording medium according to claim 24, wherein the defect list information is temporary defect list information with a recording size smaller than four clusters.

28. The recording medium according to claim 27, wherein the recording size is two clusters or smaller.

29. The recording medium according to claim 27, wherein the defect list information has a recording size of one cluster.

30. A recording medium comprising:

at least one spare area in a data area;

a temporary defect management area for managing a defective area within the data area;

a portion of said at least one spare area capable of storing replacement data, wherein data written in the defective area is replaced by writing the data written in the defective area to the portion of said at least one spare area as the replacement data; and

defect list information and disc definition structure information in the temporary defect management area for access to the data written in the portion of the at least one spare area,

wherein the defect list information includes defect entries corresponding to the replacement data actually written, and the disc definition structure information includes writing location information of a next available sector of the at least one spare area for replacement writing as at least one navigation pointer.

31. The recording medium according to claim 30, wherein the defect list information includes a defect list terminator for indicating a termination of writing of defect entries.

32. The recording medium according to claim 30, wherein the writing location information is writing location information corresponding to a first sector of a first cluster of the spare area available for successive replacement writing of new replacement data.

33. The recording medium according to claim 30, wherein the disc definition structure information includes physical sector number information corresponding to a writing location of the defect list information.

34. The recording medium according to claim 30, wherein the recording medium is a Blu-ray disc of writable once type with an inner spare area and an outer spare area assigned thereto, and the disc definition structure information includes writing location information corresponding to a first sector of a first cluster of the inner spare area available for successive

replacement writing of replacement data, and writing location information corresponding to a first sector of a first cluster of the outer spare area available for successive replacement writing of replacement data.

35. The recording medium according to claim 30, wherein the recording medium is a dual layer Blu-ray disc of writable once type with a first layer inner spare area and a first layer outer spare area assigned to a first layer, and a second layer inner spare area and a second layer outer spare area assigned to a second layer, and the disc definition structure information includes writing location information corresponding to first available sectors of first clusters of the respective inner spare areas of the first and second layers for successive replacement writing of replacement data, and writing location information corresponding to first available sectors of first clusters of the respective outer spare areas of the first and second layers for successive replacement writing of replacement data.

36. An apparatus for managing an optical recording medium having at least one temporary defect management area, and at least one spare area in a data area, said apparatus comprising:

means for replacing data written in a defective area by writing the data written in the defective area to the at least one spare area as replacement data if the defective area within the data area is detected; and

means for writing defect management information in the at least one temporary defect management area for access to the data written in the

spare area, wherein said defect management information for access to the data written in the spare area is identified by at least one navigation pointer.

37. The apparatus according to claim 36, wherein the defect management information is written as defect list information in the at least one temporary defect management area by said means for writing defect management information, and the defect list information includes navigation pointer information including defect entries corresponding to actual written replacement data, and writing location information of the next available spare area for successive replacement writing.

38. An apparatus for managing an optical recording medium having at least one temporary defect management area, and at least one spare area in a data area, said apparatus comprising:

means for replacing data written in a defective area of the data area in the at least one spare area in place of the defective area as replacement data if the defective area within the data area is detected; and

means for producing defect list information and disc definition structure information in the at least one temporary defect management area for access to the data written in the at least one spare area as replacement data, and the defect list information includes defect entries corresponding to the replacement data actually written, and the disc definition structure information includes writing location information of a next available sector of

the at least one spare area for replacement writing as at least one navigation pointer.